

## Description

ORALITE® GP 340 Shadow is a tough weather and solvent resistant tape designed to be sewn or high frequency welded on to high visibility garments. The reflectivity exceeds the highest performance level of EN ISO 20471:2013, and an approved testing laboratory has certified the tapes. The fluorescent lime version is in addition certified to EN ISO 20 471:2013 Combined Performance.

## Product Construction

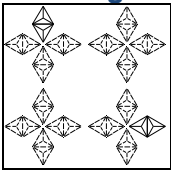
ORALITE® GP 340 Shadow is composed of cube corner (microprism) retroreflective elements integrally bonded to a flexible, smooth-surfaced tough and weather resistant UV stabilised polymeric film. The reflective material is welded to a UV stabilised polymeric film to protect the prism surfaces from dirt and moisture.

## Product Approvals

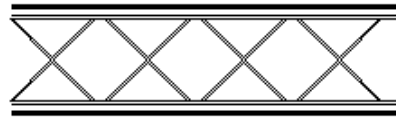
EN ISO 20471:2013

Test certificates for garment CE mark acquisition are available upon request.

## Film Logo Pattern



## Visual Appearance



## Colour

ORALITE® GP 340 Shadow is available with the reflective film in white, orange and fluorescent lime. ORALITE® GP 340 Shadow is customised by printing a subtle logo underneath the reflective top film. We recommend to use white (or light colour) backing to get the best effect.

ORALITE® GP 340 Shadow conforms to the colour requirements in Table 2 when measured in accordance with CIE Publication No. 15.2. The four pairs of coordinates determine the acceptable colour when measured with standard illuminant D65 using a Hunter LabScan.

## Retroreflectivity

ORALITE® GP 340 Shadow tapes comply with the minimum reflectivity requirements of EN ISO 20471:2013 separate performance, when tested in accordance with the procedures in EN ISO 20471:2013. *Typical* coefficients of retroreflection for ORALITE® GP 340 Shadow are provided in Table 1 and Table 2.

## Care Instructions

ORALITE® GP 340 Shadow when washed in accordance with EN ISO 20471:2013 will withstand a minimum of 100 washings at 60° C when attached to a variety of background materials.



### Application Instructions

Please contact ORAFOL for full instructions.

### Shelf Life

The product must be used within one year from the shipment date. All rolls including partially used rolls should be stored in original packaging, tightly wound. Store in a clean and dry area, away from direct sunlight. Store at 20° C and 50% relative humidity.

**Table 1 – Retroreflectivity, white / fluorescent lime**

Observation Angle	Entrance Angle ( $\beta_1, \beta_2=0$ )			
	5°	20°	30°	40°
0,20°	580	450	300	200
0,33°	370	300	200	150
1,00°	100	90	50	40
1,50°	25	20	18	14

All values have units of cd/lux/m<sup>2</sup>.

**Table 2 – Retroreflectivity, orange**

Observation Angle	Entrance Angle ( $\beta_1, \beta_2=0$ )			
	5°	20°	30°	40°
0,20°	400	315	210	140
0,33°	280	240	180	100
1,00°	70	60	35	25
1,50°	16	14	12	8

All values have units of cd/lux/m<sup>2</sup>.

**Table 3 - Colour Specification Limits**

Colour	Chromaticity Coordinates*							
	1		2		3		4	
	x	y	x	y	x	y	x	y
15 White	0,303	0,300	0,368	0,366	0,340	0,393	0,274	0,329
20 Fl.lime	0,387	0,610	0,356	0,494	0,398	0,452	0,460	0,540
07 Orange	0,558	0,352	0,636	0,364	0,570	0,429	0,506	0,404

\* The four pairs of chromaticity coordinates determine the acceptable chromaticity on the CIE diagram. The minimum luminance data is required for combined fluorescent performance tapes only.

### IMPORTANT NOTE

All ORAFOL products are subject to careful quality control throughout the entire manufacturing process, and it is ensured that they are of merchantable quality and free from manufacturing defects. The information published is based on our analyses and studies and does not constitute any warranted properties or any agreement as to quality. Due to the diverse possibilities of use of ORAFOL products and the constant development of new applications, the buyer should carefully consider the suitability and performance of the product for the respective purpose; it bears all risks associated with such use. No warranty is given for purposes other than those listed in the Technical Data Sheet or for applications that are not processed in accordance with ORAFOL's processing instructions.

The durability of the end product depends upon a variety of factors, including but not limited to substrate selection and preparation, compliance with the recommended application guidelines, geographical area, exposure conditions and maintenance of the ORAFOL material and of the end product. Product defects caused by the substrate or improper surface preparation do not lie within ORAFOL's sphere of responsibility.

When using ORAFOL products, the pertinent national regulations are to be observed. ORAFOL recommends that you obtain the current stipulations from your local authority and ensure that the product meets these requirements. Please contact ORAFOL for further information.

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